2015

MNC1S Curriculum Modification for 2016-17

Fanshawe College

CURRICULUM MODIFICATION REQUEST FORM

RECEIVED
NOV 30 2015
Office of the Registrar

COURSE OR PROGRAM CURRICULUM "RATIONALE FOR CHANGE"

Program Requiring Changes

Program Title: Mechancial Technician-CNC/CAM	
Program Number: MNC1S	Date Submitted: 10/26/2015
Dean responsible for program: S. Cluett	Chair: R. Fair
Credential Provided: ☐ Declaration of Academic Achievement ☐ Local Certificate ☐ Ontario College Certificate ☒ Diploma ☐ Advanced Diploma ☐ Grad Certificate ☐ Degree ☐ Apprenticeship	
Program Intakes: ☒ F ☒ W ☐ S Other:	Catalogue Year(s) Impacted: 2017
Residency Requirement: ☒ Met or ☐ Not Met	Date of Last Program Review: 3/1/2014

I have read the reasons for the change and...		*Signature and date*
Dean of Faculty (responsible for program):	☑ Approve ☐ Do Not Approve	Nov 25/15
Dean of Faculty (impacted by change):	☐ Approve ☐ Do Not Approve	
Dean of Faculty (impacted by change):	☐ Approve ☐ Do Not Approve	
Associate Vice President Academic (required for major changes and late DAs):	☑ Approve ☐ Do Not Approve	12/20/15
Director, Centre for Academic Excellence:	☑ Supports ☐ Does Not Support	Dec 15/15
Office of the Registrar:	☐ Supports ☐ Does Not Support	

3.0 Students

3.1 Will the change affect the cost of the program for students?

☐ Yes
☒ No

3.2 If yes, there will be an additional cost for:

☐ Materials (Include details):
☐ Equipment (Include details):
☐ Other (Please describe):

4.0 Program Learning Outcomes

4.1 Will the proposed change meet the Program Vocational Learning Outcomes? (Complete Appendix B)

☒ Yes
☐ No

4.2 Are there any implications related to progression because of pre-requisite courses (and/or co-requisite courses)?

☒ No
☐ Yes (If yes, please explain)

5.0 Relationships with Other Programs

5.1 Are any of the courses impacted by the change provided by another School (e.g., SLLS, LKSB) and/or delivered at another campus?

☒ No
☐ Yes

5.2 What Schools/Campuses will be impacted by the proposed change?

☐ School of Information Technology
☐ Lawrence Kinlin School of Business
☐ School of Tourism and Hospitality
☐ School of Health Sciences
☐ School of Human Services
☐ School of Nursing
☐ School of Public Safety
☐ School of Contemporary Media
☐ School of Design
☐ School of Language and Liberal Studies
☐ School of Aviation Technology
☐ School of Applied Sciences and Technology

7.2.1 Are the total program hours consistent with the requirements as listed below?

☒ Yes
☐ No (If no, please explain)

Local Certificate - 300 hours	**Ontario College Certificate** - 600 hours
Diploma - 1200 to 1400 hours	**Advanced Diploma** - 1800 to 2000 hours
Graduate Certificate - 600 hours	

APPENDIX A: PROPOSED CURRICULUM MODIFICATION

Course Code	Existing DA Courses	Total Hours	Total Credits	Describe proposed changes	Course Code	Proposed DA Courses	Total Hours	Total Credits
Level 1								
DRAF-1056	Blueprint Reading	45	3		DRAF-1056	Blueprint Reading	45	3
CADD-1058	Computer Aided Design 1	45	3		CADD-1058	Computer Aided Design 1	45	3
COMP-1336	Computer Literacy	30	2		COMP-1336	Computer Literacy	30	2
MACH-1130	Conventional Machine Shop	150	5.5		MACH-1130	Conventional Machine Shop	150	5.5
COMM-1004	Language & Communication Skills 1	45	3		COMM-1004	Language & Communication Skills 1	45	3
MECH-1075	Conventional Machining Theory	45	3		MECH-1075	Conventional Machining Theory	45	3
MATH-1158	Mathematics 1	30	1		MATH-1158	Mathematics 1	30	1
	TOTAL	390	20.5			**TOTAL**	390	20.5
Level 2								
CADD-3023	Computer Aided Design 2	32	2		CADD-3023	Computer Aided Design 2	32	2
MACH-1131	Computer Numerical Control 1	80	4.5		MACH-1131	Computer Numerical Control 1	80	4.5
MECH-1077	Geometric Dimensioning & Tolerancing 1	16	1		MECH-1077	Geometric Dimensioning & Tolerancing 1	16	1
MACH-1129	Jig & Machine Theory	16	1		MACH-1129	Jig & Machine Theory	16	1
MATH-3051	Mathematics 2	16	1		MATH-3051	Mathematics 2	16	1
COMM-1075	Workplace Skills 1	16	1		COMM-1075	Workplace Skills 1	16	1
COOP-1020	Co-operative Education and Employment Prep	6	1	Move to Level 3				
	TOTAL	182	11.5			**TOTAL**	176	10.5
Level 3								
CADD-3024	Computer Aided Design 3	28	2		CADD-3024	Computer Aided Design 3	28	2
MACH-3048	Computer Numerical Control 2	75	3.5		MACH-3048	Computer Numerical Control 2	75	3.5
MECH-1076	Geometric Dimensioning & Tolerancing 2	14	1		MECH-1076	Geometric Dimensioning & Tolerancing 2	14	1
MECH-3031	Jig & Fixtures and Machining 2	14	1		MECH-3031	Jig & Fixtures and Machining 2	14	1
MATH-3053	Mathematics 3	14	1		MATH-3053	Mathematics 3	14	1
COMM-3019	Workplace Skills 2	14	1		COMM-3019	Workplace Skills 2	14	1
				Course moved from Level 2	COOP-1020	Co-operative Education and Employment Prep	6	1
	TOTAL	159	9.5			**TOTAL**	165	10.5
Level 4								
CADD-1059	Computer Aided Machining	105	6		CADD-1059	Computer Aided Machining	105	6
MACH-3049	Computer Numerical Control 3	150	7.5		MACH-3049	Computer Numerical Control 3	150	7.5

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MATH-3056	Mathematics 4	30	2		MATH-3056	Mathematics 4	30	2
MECH-1004	SPC and Metrology	60	3.5	New Course	MACH-1166	Quality Assurance	60	4
				New Mandatory General Education Course	BUSI-1103	Intro to Business Concepts	45	3
	TOTAL	345	19			**TOTAL**	390	22.5
	PROGRAM TOTAL	1076	60.5			**PROGRAM TOTAL**	1121	63.5

PROGRAM MAPPING (Mechanical Technician- CNC/CAM MNC1S - Diploma)

PROGRAM VOCATIONAL LEARNING OUTCOMES 1 - Introductory 2 - Intermediate 3 - Advanced **The graduate has reliably demonstrated the ability to: (Source: MTCU Code:55300)**	LEVEL ONE							LEVEL TWO						# OF COURSES EVALUATING THE OUTCOME
	DRAF-1056- Blueprint Reading	CADD-1058- Computer Aided Design 1	COMP-1336- Computer Literacy	MACH-1130- Conventional Machine Shop 1	COMM-1004- Language & Communication Skills 1	MECH-1075- Conventional Machining Theory	MATH-1158- Mathematics 1	CADD-3023- Computer Aided Design 2	MACH-1131- Computer Numerical Control 1	MECH-1077- Geometric Dimensioning & Tolerancing 1	MACH-1129- Jig & Machine Theory	MATH-3051- Mathematics 2	COMM-1075- Workplace Skills 1	
1. complete all work in compliance with current legislation, standards, regulations and guidelines.		1		1			1	1	1			1		6
2. apply quality control and quality assurance procedures to meet organizational standards and requirements.	1	1		1			1	2	1	1	2	1		9
3. comply with current health and safety legislation, as well as organizational practices and procedures.				1		1			1				1	3
4. apply sustainability best practices in workplaces.		1		1		1		1	1				1	5
5. use current and emerging technologies to support the implementation of mechanical and manufacturing projects.		1	1	1		1		2	2	1	1			8
6. analyze and solve mechanical problems by applying mathematics and fundamentals of mechanics.	1	2		1				2	2		1			6
7. interpret, prepare and modify mechanical drawings and other related technical documents.	1	1		1				2	2	1				6
8. perform technical measurements accurately using appropriate instruments and equipment.		1		1		1		1	1					5
9. manufacture, assemble, maintain and repair mechanical components according to required specifications.				1					1					2
10. contribute to the planning, implementation and evaluation of projects.				1					1		1		1	3
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE	3	7	1	10	0	4	2	7	10	3	4	2		
V = Vocational Courses E = Essential Employability Skills Courses **GM = General Education (mandatory) G = General Education (elective)**														

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Christine Zimmerman

ACADEMIC CHAIR: Ross Fair

Date Completed: October 28, 2015

Analysis of Mapping Results:

PROGRAM MAPPING (Mechanical Technician- CNC/CAM MNC1S - Diploma)

PROGRAM VOCATIONAL LEARNING OUTCOMES 1 - Introductory 2 - Intermediate 3 - Advanced **The graduate has reliably demonstrated the ability to: (Source: MTCU Code:55300)**	LEVEL THREE							LEVEL FOUR					# OF COURSES EVALUATING THE OUTCOME	TOTAL FOR PROGRAM
	CADD-3024- Computer Aided Design 3	MACH-3048- Computer Numerical Control 2	MECH-1076- Geometric Dimensioning & Tolerancing 2	MECH-3031- Jig & Fixtures and Machining 2	MATH-3053- Mathematics 3	COOP-1020-Cooperative Education	COMM-3019- Workplace Skills 2	CADD-1059- Computer Aided Machining	MACH-3049- Computer Numerical Control 3	MATH-3056- Mathematics 4	MACH-1166 Quality Assurance	BUSI-1103 Intro to Business Concepts		
1. complete all work in compliance with current legislation, standards, regulations and guidelines.	2	2		1	2	1		3	3	2		1	9	15
2. apply quality control and quality assurance procedures to meet organizational standards and requirements.	2	2	1					3	3		1		6	15
3. comply with current health and safety legislation, as well as organizational practices and procedures.		2				1	1	3	3			1	6	9
4. apply sustainability best practices in workplaces.	2	2					1	3	3		2		6	11
5. use current and emerging technologies to support the implementation of mechanical and manufacturing projects.	3	2	1	1				3	3				6	14
6. analyze and solve mechanical problems by applying mathematics and fundamentals of mechanics.	2	2			2			3	3	2	3		7	13
7. interpret, prepare and modify mechanical drawings and other related technical documents.	3	2	1	2				3	3	2	3		8	14
8. perform technical measurements accurately using appropriate instruments and equipment.	2	2						3	3				4	9
9. manufacture, assemble, maintain and repair mechanical components according to required specifications.		2						3	3				3	5
10. contribute to the planning, implementation and evaluation of projects.		2		2				2	3			1	5	8
TOTAL # OF OUTCOMES EVALUATED BY EACH COURSE	7	10	3	4	2		2	10	10	3	4	3		
V = Vocational Courses E = Essential Employability Skills Courses														
GM = General Education (mandatory) G = General Education (elective)														

NB - Only indicate the outcomes that are Taught & Evaluated (TE or TRE) in a course

PROGRAM COORDINATOR: Christine Zimmerman

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Date Completed: October 28, 2015

Analysis of Mapping Results:

PROGRAM MAPPING (Mechanical Technician- CNC/CAM MNC1S - Diploma)														
	LEVEL ONE							LEVEL TWO						
PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES 4 = R 5 = RE 6 = TE 7 = TRE T = Taught R = Reinforced E = Evaluated **The graduate has reliably demonstrated the ability to: (Source: MTCU Code:55300)**	DRAF-1056- Blueprint Reading	CADD-1058- Computer Aided Design 1	COMP-1336- Computer Literacy	MACH-1130- Conventional Machine Shop 1	COMM-1004- Language & Communication Skills 1	MECH-1075- Conventional Machining Theory	MATH-1158- Mathematics 1	CADD-3023- Computer Aided Design 2	MACH-1131- Computer Numerical Control 1	MECH-1077- Geometric Dimensioning & Tolerancing 1	MACH-1129- Jig & Machine Theory	MATH-3051- Mathematics 2	COMM-1075- Workplace Skills 1	# OF COURSES SUPPORTING THE OUTCOME
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.	TE	TE	TE		TE					TE			TE	6
2. respond to written, spoken, or visual messages in a manner that ensures effective communication.			TE		TE								TRE	3
3. execute mathematical operations accurately.	TE			TE		TE	TE	TRE	TE			TRE		7
4. apply a systematic approach to solve problems.	TE						TE		TE	TE		TE		5
5. use a variety of thinking skills to anticipate and solve problems.	TE	TE		TE			TE	TRE			TE	TRE		7
6. locate, select, organize, and document information using appropriate technology and information systems.		TE	TE			TE		TRE	TE					5
7. analyze, evaluate, and apply relevant information from a variety of sources.						TE	TE			TE	TE			4
8. show respect for the diverse opinions, values, belief systems, and contributions of others.					TE	TE							TE	3
9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.					TE								TE	2
10. manage the use of time and other resources to complete projects.		TE		TE				TE	TE		TE		TE	6
11. take responsibility for one's own actions, decisions, and consequences.	TE				TE	TE					TE		TE	5
TOTAL # OF OUTCOMES SUPPORTED BY EACH COURSE	5	4	3	3	5	5	4	4	4	3	4	3	6	

PROGRAM COORDINATOR: Christine Zimmerman

ACADEMIC CHAIR: Ross Fair

Date Completed: October 28, 2015

PROGRAM MAPPING (Mechanical Technician- CNC/CAM MNC1S - Diploma)

PROGRAM ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES 4 = R 5 = RE 6 = TE 7 = TRE T = Taught R = Reinforced E = Evaluated **The graduate has reliably demonstrated the ability to: (Source: MTCU Code:55300)**	LEVEL THREE							LEVEL FOUR					# OF COURSES SUPPORTING THE OUTCOME	TOTAL FOR PROGRAM
	CADD-3024-Computer Aided Design 3	MACH-3048-Computer Numerical Control 2	MECH-1076-Geometric Dimensioning & Tolerancing 2	MECH-3031- Jig & Fixtures and Machining 2	MATH-3053-Mathematics 3	COOP-1020-Cooperative Eduacation	COMM-3019-Workplace Skills 2	CADD-1059-Computer Aided Machining	MACH-3049-Computer Numerical Control 3	MATH-3056-Mathematics 4	MACH-1166 Quality Assurance	BUSI-1103 Intro to Business Concepts		
1. communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.	TRE		TE			TE	TRE	TE	TRE		TE	TE	8	14
2. respond to written, spoken, or visual messages in a manner that ensures effective communication.						TE		TE			TE	TE	4	7
3. execute mathematical operations accurately.		TE			TE				TRE	TE			4	11
4. apply a systematic approach to solve problems.		TE	TE	TE	TE					TE	TE		6	11
5. use a variety of thinking skills to anticipate and solve problems.	TE	TE	TE	TE	TE			TE			TE		7	14
6. locate, select, organize, and document information using appropriate technology and information systems.		TE		TE				TE	TRE				4	9
7. analyze, evaluate, and apply relevant information from a variety of sources.		TE		TE	TE					TE	TE		5	9
8. show respect for the diverse opinions, values, belief systems, and contributions of others.							TRE					TE	2	5
9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.							TE		TRE			TE	3	5
10. manage the use of time and other resources to complete projects.	TE							TE	TRE				3	9
11. take responsibility for one's own actions, decisions, and consequences.				TE		TE	TRE					TE	4	9
TOTAL # OF OUTCOMES SUPPORTED BY EACH COURSE	3	5	3	5	4		4	5	5	3	5	5		

PROGRAM COORDINATOR: Christine Zimmerman

ACADEMIC CHAIR: Ross Fair

Date Completed: October 28, 2015

Degree Audit Report

Catalog: 2016/2017

Program: MNC1S
Name: Mechanical Technician - CNC/CAM
Department: STE - St Thomas/Elgin Campus
Academic Level: PS
CCD: 2 - Two Year Diploma
Credential: Ontario College Diploma

Grade Scheme: LG2
Major: MNC1S - Mechanical Tech'n - CNC/CAM
Div: STE - St Thomas/Elgin Campus
Co-Op Indicator: Mandatory Co-op

Academic Program Requirement

Total Credits: 69.50
Residency Reqmt: 18.00
GPA Requirement: 2.000
Residency Reqmt GPA: 2.000
Minimum Grade: D

Academic Requirement: MNC1S.16 Mechanical Technician - CNC/CAM

Major: MNC1
Grade Scheme: LG2
Minimum GPA: 2.000
Minimum Grade:

Subrequirement: Level 1

Gen Ed - Take a 3 credit General Education elective course
Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
DRAF-1056	Blueprint Reading	45.00	3.00	
CADD-1058	Computer Aided Design 1	45.00	3.00	
COMP-1336	Computer Literacy	30.00	2.00	
MACH-1130	Conventional Machine Shop 1	150.00	5.50	
COMM-1004	Language & Communication Skills 1	45.00	3.00	
MECH-1075	Conventional Machining Theory	45.00	3.00	
MATH-1158	Mathematics 1	30.00	1.00	

Subrequirement: Level 2

Gen Ed - Take a 3 credit General Education elective course
Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CADD-3023	Computer Aided Design 2	32.00	2.00	
MACH-1131	Computer Numerical Control 1	80.00	4.50	
MECH-1077	Geometric Dimensioning & Tolerancing 1	16.00	1.00	
MACH-1129	Jig & Machine Theory	16.00	1.00	
MATH-3051	Mathematics 2	16.00	1.00	
COMM-1075	Workplace Skills 1	16.00	1.00	
~~COOP-1020~~	~~Co-operative Education-Employment Prep~~	~~6.00~~	~~1.00~~	move to level 3

Subrequirement: Level 3

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE

Degree Audit Report

CADD-3024	Computer Aided Design 3	28.00	2.00
MACH-3048	Computer Numerical Control 2	75.00	3.50
MECH-1076	Geometric Dimensioning & Tolerancing 2	14.00	1.00
MECH-3031	Jig & Fixtures and Machining 2	14.00	1.00
MATH-3053	Mathematics 3	14.00	1.00
COMM-3019	Workplace Skills 2	14.00	1.00
COOP-1020	Cooperative Education and Employment Prep	6.00	1.00 - moved from Level 2

Subrequirement: Level 4

~~Gen Ed - Take a 3 credit General Education elective course~~

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CADD-1059	Computer Aided Machining	105.00	6.00	
MACH-3049	Computer Numerical Control 3	150.00	7.50	
MATH-3056	Mathematics 4	30.00	2.00	
~~MECH-1004~~	~~SPC and Metrology~~	~~60.00~~	~~3.50~~	remove
ADD MACH-1166	Quality Assurance	60	4.00	

Subrequirement: Gen Ed - Electives

Take 9 General Education Credits - ADD BUSI-1103 Intro to Business Concepts 45.00 3.00

Normally taken in Levels 1, 2 and 4

Subrequirement: Program Residency

Students Must Complete a Minimum of 18 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

Approved By Chair/Manager: _____ Department and Date: STERC 11/11/15

Approved by Dean: _____ Date: Nov 25/15

General Education Approved By(as appropriate): _____ Date: _____

12/20/15